Metabolic syndrome, abnormal glucose tolerance and high sensitivity-C-reactive protein among women with a history of Gestational Diabetes Mellitus

Abstract

Background: Gestational Diabetes Mellitus (GDM) is a risk factor for diabetes and cardiovascular diseases. Early detection of cardio-metabolic risks is recommended for management. This study evaluated the associations between Metabolic Syndrome (MetS), abnormal glucose tolerance and cardiovascular risk factors in Malaysian women with prior GDM. Method: Seventy-seven, non-diabetic women post-GDM, aged 20-40 years (mean BMI: 26.4 ± 4.6kg/m2) with high type 2 diabetes risks, were evaluated at a median of four months postpartum. Their anthropometric and biochemical measurements were obtained. Results: The overall prevalence of MetS and dysglycaemia were 22% and 29% respectively. Dysglycaemic was predominantly impaired glucose tolerance (IGT: 77%).MetS was higher among dysglycaemic subjects although also detected in 13% of normo glycaemic subjects. Eighty percent of IGT subjects did not have MetS. Sixty-eight percent of subjects had intermediate or high CVD risks (hsCRP>1mg/L). hscRP increased with obesity and was not associated with glycaemic status. Infant birth weight, maternal age and triglycerides were independent predictors of dysglycaemia ($p<0.05$). Conclusion: Despite the low prevalence of MetS, elevated levels of hsCRP among these women with prior- GDM was highly prevalent. Normoglycaemic subjects with MetS demonstrated intermediate to high risk hsCRP levels. The findings also emphasize the importance of performing OGTT mainly in older post-GDM women, with higher triglycerides and infants who are large for gestational age.

Keyword: Gestational diabetes mellitus; Type 2 diabetes; Metabolic syndrome; Cardiovascular risks; Dysglycaemia; Dyslipidaemia